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Overcoming the barriers in implementing TQM and sustaining the success through continuous quality improvement: Deming's 14 points

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ABSTRACT

Quality, cost and delivery, aptly described as "manufacturing deliverables', are key for the success of any organization. In recent times, factors like speed of delivery, customization, flexibility, and competitive price are also considered as strategic variables. These developments have tremendously increased the pressure on the operations managers who are looking out for possible ways and means of achieving these multiple objectives. To be successful, TQM program may be included and reliable information on the results of implementation between departments should be made.

1. Introduction

Organizations at present faced two common challenges (1) survival in the era of globalization and liberalization, and (2) ensuring reasonable profits for the sustenance and growth of operations. Hence, developing an overall strategy to survive and progress in the competitive environment is recognized as an important and crucial step in establishing the organizational long-term goals and objectives.[1] The worldwide awareness on quality has naturally forced the managers of all industrial and business activities to concentrate on various tools and techniques to improve the quality levels of products and services Fiegenbaum (1988).[2] Total Quality Management (TQM) is seen as an important breakthrough in the second half of 20th century. TQM is customer oriented, and involves organizational effort, team work and scientific approach. The components of it are divided under three groups; philosophy, management policies and procedures, and tools. In this context the paper examined how TQM has established itself as a stepping stone to success and demonstrates Deming's 14 points are useful in implementing and sustaining TQM.[3]

1.1. Literature review

Many organizations have realized that they are not able to survive or make profits unless they constantly meet the changing needs, wants and requirements of their customers. Feigenbaum's (1988), seems to include all the elements contained in TQM. Rastrick (2000), pursued the benefits of TQM have been well documented and include bottom line improvements in competitiveness, productivity and market share. Gehani (1993), and Vupplapati, et al., (1995), comment that TQM is based on the premise that an organization must build quality into its products and processes, and that everyone in the organization has a responsibility in this effort. Vermeulen (1997) exhibited that an organization decides the future of the organization which may be decline or growth.[4] Eskildson (1994) has discussed about some surveys which reflected the poor results of TQM. Dooley and Flor (1998), over time, appear to have been a significant shift

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in the aggregate, or "average" perceptions concerning TQM success and failure. Kate Eby (2021), Mahesh Kumar Choudhary and Nirmala Singh Rathore (2013), Uluskan, M., Godfrey, A.B. and Joines, J.A. (2017),[5] Mauro Sciarelli, Mohamed Hani Gheith, and Mario Tani (2020), Chinnappa T B, and Karunakaran N (2021), Chinnappa, T B, Karunakaran N and Ajith Kumar K R (2021), and Karunakaran N (2022) analyzed the role of effective communication in total quality management.,

2. TQM Implementation Strategies

The effective transformation to the total quality management (TQM) organization has been linked to the extent to which firms successfully implement certain critical quality management practices [Deming (1986), Crosby (1979), and Juran (1986)].[5] These include top management commitment, training and education, supplier management, process management, and human resource development. Lord and Lawrence (2001), introduced TQM into an organization involves a change in culture. It is used merely to identify barriers that must be overcome for successful implementation (Morris and Haigh, 1996).

As stated by Cupello (1994), successful TQM implementation is dependent on the existence of a total quality culture among all personnel. It is therefore recommended that top management should appoint a steering committee in order to pay attention to the problem areas indicated in the research process. The steering committee should pay particular attention in aspects like:

Developing methods to stress top management's commitment to total quality;

Lead the way by top management in setting a quality culture and environment; introduction of TQM and related concepts to all employees; continuous TQM training for all employees; improving communication systems (top-down and bottom-up) and communication on quality issues; participation of employees in strategic planning; developing an environment to encourage creativity and innovation; Linking rewards to quality improvements. Claver, Tari and Francisco (2003) argued critical factors need to be identified for ensuring success in implementing TQM.[6] Sink (1991) has suggested the following to the design, development and implementation of TQM:

Stage 0: Understanding the organizational system.
Stage 1: Developing a strategic plan for the TQM.
Stage 2: Planning assumptions.
Stage 3: Specifying strategic objectives.
Stage 4: Specifying tactical objectives.
Stage 5: Implementation planning.
Stage 6: Project management.
Stage 7: Measurement and evaluation.
Stage 8: Evaluation, accountability and ensuring effective implementation.

Luchsinger and Blois (1990) outlined TQM implementation plan of AFSC (Air Force System Command) as follows: awareness and commitment; incorporation into the acquisition process;

Assessment of progress; elimination of barriers.[1–15]

3. Why TQM Fails and How to Overcome The Barriers

Bacal (2007) stated several reasons as to why TQM fails. These could be summarized as:

1. Improper Planning
2. Management Confusion
3. Inadequate Support to Managers
4. Partial Implementation (Hedging)
5. Inadequate Marketing
6. Impatience

The suggestions and recommendations need to be observed while implementing TQM. It is equally interesting to know why TQM initiative may not succeed. Some of the observations are:

1. Lack of top management
2. Too many changes too quickly
3. Pressure for immediate results
4. Quality Vs Quantity conflict
5. Too much negative feedback
6. Fear of being open/honest
7. Little input from superiors
8. Subordinates unwilling to change
9. Non-productive time on meetings and paper work
10. Problems not being fixed the first time
11. Based on these observations, it is suggested the following before embarking TQM:
12. Emphasize the time required
13. Quality once achieved needs more efforts to sustain the results
14. TQM is ongoing commitment; there is no end.

4. Deming's 14 points

Deming (1986), propounded in terms of 14 principles, the conditional on implementing the 14 points. Tamimi (1995) has empirically collapsed Deming's 14 principles into eight meaningful factors using exploratory factor analysis.[16–20] These factors were defined as top management commitment, supervisory leadership, and education, cross functional communication, supplier management, quality training, product/service innovation, and providing assurance to employees.

Deming's 14 points are:

1. Create constancy of purpose toward improvement of product and service with a plan to become competitive – to stay in business and to provide jobs.

2. Adopt a new philosophy, with commonly accepted levels of delays, mistakes, defective materials and defective workmanship.
3. Cease dependence on mass inspection. Require instead, statistical evidence that quality is built in to eliminate need for inspection on a mass basis.
4. End the practice of awarding business on the basis of price tag alone. Instead, depend on meaningful measures of quality along with price.
5. Improve constantly and forever the system of production and service. It is management's job to work continually on the system.
6. Institute a vigorous program of education and retraining.
7. Adopt and institute leadership. The responsibility of supervision must be changed from sheer numbers to quality. Improvement of quality will automatically improve productivity.
8. Drive out fear so that everyone may work effectively for the company.
9. Break down barriers between departments. People in research, design, sales and production must work as a team to foresee problems of production that may be encountered with various materials and specifications.
10. Eliminate numerical goals, posters and slogans for the workforce that asks for new levels of productivity without providing new methods.
11. Eliminate work standards that prescribe numerical quotas.
12. Remove barriers that stand between the hourly worker and his right to pride of workmanship.
13. Encourage education and self-improvement for everyone.
14. Create a structure in top management that will push every day on the above thirteen points.

5. Conclusion

Many firms have arrived at the conclusion that effective TQM implementation can improve their competitive abilities and provide strategic advantages in the marketplace. A number of success stories have been well described on it. However, after some time, TQM was criticized as not effective and eventually was projected as failure. Several researchers also reported that TQM implementation has led to improvements in quality, productivity, and competitiveness Thus, conflicting research findings have been reported surrounding the effects of TQM implementation on overall business performance However, on careful examination it was clearly brought out that it is not TQM that is to be blamed but the way in which it is being implemented. Several organizations are viewing a TQM campaign as a panacea and a cure-all for every problem. They embrace this approach without understanding its impact on the long-term management practices of their organizations and fail to achieve lasting results. It is essential for these organizations to understand the short- and long-term implications of embarking on a TQM initiative. To be successful, a TQM program should also include the generation of timely and reliable information on the results of implementing TQM. Besides a re-evaluation of existing methods of communication between departments implementing TQM should be made. Further, standards to measure and control the cost of quality should be developed. TQM based on different models, enables the managers to smoothly introduce and ensure success. Besides, two important requirements are patience and long time frame. Hence, it can be concluded that it is not correct to question the efficacy of TQM if desired results are not seen. It is rather important to meticulously plan for the implementation and fix a judicious time frame to get the expected results.

6. Source of Funding

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7. Conflict of Interest

None.

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